MERCURY CONCENTRATIONS IN WISCONSIN RIVER OTTERS (*Lutra canadensis)*

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Abstract

The Wisconsin Department of Natural Resources (with cooperation from the Wisconsin Trapper's Association) initiated an investigation to examine the levels of mercury in tissues of Wisconsin river otters (*Lutra canadensis*). Mercury is a persistent, bioaccumulative and toxic metal that occurs in the environment both naturally and as a result of human activity. Toxic effects associated with exposure to mercury in wildlife include damage to the central nervous system, behavioral abnormalities, damage to the excretory system, immunotoxicity and reproductive impairment. Due to the high trophic position occupied by otters and their sensitivity to certain environmental contaminants, they may serve as indicator species of healthy environments.

A four-county sampling area was identified in each of the three otter trapping zones (Northern Zone: Vilas, Onieda, Price and Iron counties, Central Zone: Marathon, Portage, Waupaca, and Wood counties, Southern Zone: Columbia, Dodge, Grant, and Sauk counties). The northern zone represents an expected high mercury area based on previous fish, bird, and water chemistry data. The southern zone represents a low mercury area.

In 2002-03, successful otter applicants in the identified counties were asked to donate their otter carcasses for this study. The response was excellent with approximately 275 trappers offering to donate their otter carcasses. With cooperation from the Wisconsin Trapper's Association, approximately 80 carcasses were donated in the first year of the study.